

**CITY OF BALTIMORE  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF SOLID WASTE**

**TEN YEAR SOLID WASTE MANAGEMENT PLAN  
JULY 2002**



***CHAPTER 4  
ASSESSMENT***

**4.0 ASSESSMENT**

State regulations for the development of comprehensive solid waste management plans require that Chapter 4 assesses the jurisdiction's needs to alter, extend, modify or add to existing solid waste disposal systems during the next ten years. "Solid waste disposal systems" are defined in the regulations as including the collection of waste, the transport of waste to acceptance facilities, and the treatment or disposal of waste at the acceptance facilities. The assessment is to evaluate the use of recycling and resource recovery to reduce land disposal needs, among other aspects of solid waste management.

The required assessment of the City's solid waste disposal system is presented below. The assessment is organized by focusing on the City's current key concerns one at a time, although it is recognized that these concerns are all interrelated and must be addressed simultaneously to have an effective Plan of Action. The following areas will be assessed:

- 4.1 Solid Waste Disposal System
- 4.2 QRSL Assessment
- 4.3 NWTS Assessment
- 4.4 Eastside Transfer Station
- 4.5 Regional Approach
- 4.6 Source Separation & Reduction
- 4.7 Emergency Response System

To assist the City in the continual self-assessment of our services, the City has implemented CITISTAT, which is a performance measurement program used to evaluate the City's efficiency of operation. CITISTAT's utilization in the Bureau of Solid Waste involves the regular reporting and review of all aspects of its operation, concentrating primarily on customer service, budget, and personnel concerns. This program helps the City to distribute its resources more effectively as well as to alert the City of any areas that need additional attention. Continued use of this tool, as well as continued feedback from citizens and employees is essential in developing a proper assessment of the solid waste management needs of the City now and in the period covered by this Plan.

**4.1 SOLID WASTE DISPOSAL SYSTEM****4.1.1 Public Waste Collection and Transport System Assessment**

The overall effectiveness of the City's solid waste collection system is highly rated in surveys completed by communities. This effectiveness is attributed to very reliable City collection services tailored in many respects to the convenience of residents (to encourage residents' cooperation). For example, waste is collected at the rear of many homes, allowing residents to store and use garbage cans without having to carry cans out to the front curb on mixed refuse days. Any problems with collections are usually responded to within 24 hours, 7 days a week.

Sanitation, in some neighborhood locations, occasionally falls below a satisfactory level. These instances usually result from littering, illegal dumping or residents' failures to set out refuse properly (for example, setting out garbage in bags which can be torn open by stray animals). The City's experience in implementing the regular recycling collection program suggests that occasional deficiencies can be addressed through public education, monitoring and feedback programs that extend beyond recycling. Such an extension, along with efforts to improve overall efficiency in collections has become increasingly important as the City continues to move toward making the City as clean as possible in the most cost effective way.

In order to address these concerns, the City created a Sanitation Enforcement Section in 1998 within the DPW, Bureau of Transportation, whose sanitation enforcement officers have been trained in sanitation related issues, and who have the authority to issue violations when necessary. Sanitation Enforcement Officers also distribute educational materials outlining the waste collection services provided by the City.

As part of a reorganization strategy within DPW, sanitation enforcement became a section within the Bureau of Solid Waste's Education and Enforcement Division in October 2000. The purpose was to consolidate trash collection services and code enforcement within the entity of the Bureau of Solid Waste.

Along with the increased attention directed toward sanitation citations, the City has also created an Environmental Control Board. The Board became active in October 1998. It is governed by five city Agency Department Heads, (Fire Department, Police Department, Housing and Community Development, Health Department and the Department of Public Works). There are thirteen members of the Board, who review zoning, building and housing violations. If an individual receives a citation, he or she may either pay or request a trial by the Board. Approximately 156 citations are being issued daily, with the majority being paid.

More attention is being given to educating the public about its responsibilities concerning the City's cleanliness and the importance of recycling. Brochures on various aspects of sanitation and recycling are prepared and distributed in neighborhoods, schools, and at fairs and events. Additionally, public information messages are being presented on the City's cable television station and messages are sent by e-mail and posted through the City's web site ([www.baltimorecity.gov](http://www.baltimorecity.gov)) to educate more citizens.

The residential collection system is based on fixed routes which crews follow on Monday/Thursday, Tuesday/Friday and Wednesday/Saturday. Each crew (consisting of one driver and two laborers) is assigned a route for each day worked. Individuals are scheduled to work five days per week; days off are on a rotated schedule. The crew collects all mixed refuse set out on the route for that day. The collection crew works on the "task system", where they get paid for a full 8-hour day even if they complete their routes in less than 8 hours.

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When the crew finishes collecting waste on the route (or before, if the truck is full), the crew delivers its load to the assigned waste acceptance facility. Routes are designed to allow for the necessary travel time to an assigned facility.

The number of workers employed and the number of trucks purchased are based on the number of routes. The Bureau of Solid Waste strives to employ and equip a sufficient number of crews to collect all of the refuse set out on any given collection day within 8 hours. Hours for collection crews are typically from 7:00 a.m. to 3:00 p.m.

The amount of waste set out for collection varies from season to season. However, since the work force is composed of permanent full-time employees and temporary seasonal employees, adjustments can be made in work assignments to reflect these variations.

The Chief of the Collections Division has some flexibility in assigning work to improve efficiency. Through the implementation of the Geographical Information System (GIS) and the Satellite Tracking System that is explained in the action plan in Chapter 5, the Bureau's staff will have the ability to collect real-time data and design computer models that will make a dramatic impact on how efficient the Bureau's Collection Division operates. Currently, the Division Chief may adjust collection routes as long as adjustments do not change the day of the week on which a given household's refuse is collected. They can also adjust destinations and/or delivery routes used by the crews to transport collected waste to acceptance facilities. If a crew's normal disposal destination is overloaded or out of operation on a certain day, or access via the normal route is interrupted, the crew can be directed to deliver its load to a different disposal facility and/or use a different route in traveling to the facility.

Another area that will be addressed is accessibility to waste acceptance facilities. Allowances must be made for traveling from routes to these facilities. Adjusting routes is more difficult when long trips have to be taken into account.

For the southwest, central and southeast sectors of the City, the Baltimore Refuse Energy Systems Company (BRESKO) is centrally located for mixed refuse disposal. Quarantine Road Sanitary Landfill (QRSL) is reasonably accessible for disposal of bulk items. The Northwest Transfer Station (NWTs) serves northeast and north central sectors as well as the northwest. This facility permits the transfer of waste from loadpackers into trailers for hauling to BRESKO and QRSL.

In trips to waste acceptance facilities alone, the NWTs has been estimated to save more than 11,000 hours of travel time per year in transport of debris to BRESKO and to QRSL. For example, past data indicate that crews in Borough 14 collected an average of 3.8 tons more per day than crews in Borough 23 (17.8 tons versus 14.0). The crews in Borough 14 worked only an average of 15 more minutes per day (6.35 hours versus 6.1 hours) to collect 27 percent more waste. Part of the imbalance in time between the workloads in these two boroughs is attributed to the location of Borough 14 in relation to the NWTs. Mixed refuse collected in Borough 23 must be transported longer

distances to BRESKO. Routes in Borough 14 can be longer and include more trips to the transfer station, while routes in Borough 23 must be shorter and tailored to accommodate fewer, longer trips to BRESKO.

Possibilities to further improve the efficiency of the collection system are being explored. Considering that it costs \$140,000 per year to employ and equip a single collection crew, there is the potential for significant savings in annual operating costs. Moreover, reducing the amount of travel time required to provide collection services could permit the City to increase its investment in work, providing more public benefits.

In Fall of 2000, the City began utilizing slightly larger collection vehicles (load packers) primarily in the Northern portion of the City so that fewer trips would need to be made to disposal locations, thus increasing the amount of waste that can be collected each day. Use of these vehicles also reduces the number of crews needed to perform collection services.

Given the complexity of the collection/transport system, the previously mentioned Geographical Information System (GIS) and the Satellite Tracking System will allow real-time data to be utilized to streamline the collection routes. It is expected that this system will be in use no later than 2005.

The City's curbside collection system has yet to include provisions for collecting "household hazardous wastes." This issue has been identified as a regional need and is being pursued on a regional basis. The City sponsored a regional seminar on this subject in 1993 to generate more regional thinking and planning with regard to household hazardous wastes. In the past, the City has studied alternative approaches to the management of these waste materials in Montgomery County (mobile collection), Lancaster County, PA (permanent facility), and Fairfax City, VA (curbside collection). While such wastes are not defined as hazardous for regulatory purposes, their chemical composition may present an environmental health concern if they are handled improperly. These wastes include household cleaners, batteries, paints, oil, pesticides, and solvents. Some residents have expressed a need for City collection of household hazardous wastes. A regional solid waste work group has identified household hazardous waste as one area with potential for regional program development.

The City has expanded its household hazardous waste collection day to be held twice a year, during spring and fall, at the Poly/Western High School Complex. This was a result of surveying participants on the number of times they felt the event should be held. Eighty-six percent of those responding to the survey felt the event should be held twice a year, and as a result the City complied.

With cooperation from local merchants, the City instituted a "button battery" collection and recycling program. Convenient drop-off centers have been established to collect button batteries in numerous locations throughout the City. The batteries collected are recycled in an effort to reduce the amount of lead and mercury entering the waste stream. BRESKO is providing assistance to the City by paying for the shipping and processing costs of the button

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batteries. In 1994 the City also began to collect latex paint for re-use at sanitation yards throughout the City. The paints are mixed and given to the Loading Dock, a non-profit organization, which provides the paint to low income residents for their home improvement.

An area of concern to the City is the collection of yard waste. Several alternatives are being evaluated in conjunction with recycling route analyses, including collection by City forces on a regular schedule, on-call collection, and resident drop-off to strategically located yard waste collection centers. Coordination of yard waste collection centers with transfer stations and recycling drop-off centers is part of the ongoing analysis.

### **4.1.2 Public Waste Disposal**

In March 1999, the remaining capacity of QRSL (with development of the core and Cell #6) was estimated at just over 9 million tons of waste and cover material (see Table 4-1). This capacity should be sufficient to meet the current level of demand for the ten-year planning period (2002-2011). Further discussion of QRSL takes place in Section 4.2 below.

**TABLE 4-1  
OPTIMISTIC LANDFILL LIFE PROJECTION**

Landfill Capacity (cubic yards): 18,320,622

Volume 1 Ton debris occupies as of 1999 (cubic yards): 1.3

<b>Year</b>	<b>Tonnage</b>	<b>Cubic Yards</b>	<b>% Utilized (in-place)</b>
<b>1985</b>	142,514	154,770	1%
<b>1986</b>	591,196	642,039	4%
<b>1987</b>	554,581	602,275	3%
<b>1988</b>	616,452	669,467	4%
<b>1989</b>	604,058	656,007	4%
<b>1990</b>	586,880	637,352	3%
<b>1991</b>	558,144	606,144	3%
<b>1992</b>	522,036	566,931	3%
<b>1993</b>	489,600	531,706	3%
<b>1994</b>	509,806	553,649	3%
<b>1995</b>	439,609	477,415	3%
<b>1996</b>	383,785	416,791	2%
<b>1997</b>	397,774	431,983	2%
<b>1998</b>	461,802	501,517	3%
<b>1999</b>	492,450	393,960	2%
<b>2000</b>	410,039	533,051	3%

<b>2001</b>	577,793	751,131	4%
<b>TOTAL</b>	<b>8,338,519</b>	<b>9,126,188</b>	<b>50%</b>

Remaining life in years: 19.4

The projected date which the landfill will reach capacity is 2019.

The City has identified two issues concerning waste disposal. First, there is a need to encourage the use of waste acceptance facilities and discourage illegal dumping of solid waste. Second, there is a need to plan for landfill capacity in the long term (beyond the ten-year planning period). These issues are addressed in Sections 4.1.2.1 and 4.1.2.2.

#### **4.1.2.1 Small Load Disposal**

In 1993, the City introduced a program allowing small haulers, vehicles with a  $\frac{3}{4}$  ton or less capacity who were permitted by the City Health Department, to dispose of their loads of debris at the QRSL, the NWTs and three Solid Waste Yards (2840 Sisson Street, 701 Reedbird Ave., and 6101 Bowleys Lane) for \$5.00 per load. This program has been well received by its users and appears to have reduced illegal dumping in some areas.

The two most used facilities have been the QRSL and the NWTs. The QRSL averages 3,450 small haulers or approximately 1,700 tons per month. The NWTs averages 2,280 small haulers or approximately 1,140 tons per month. Because of the large number of vehicles coming to the NWTs and to better monitor waste flow into the City's facilities, the City now accepts small haulers only at QRSL.

#### **4.1.2.2 Land Disposal Capacity Needs**

Among possible needs to "alter, extend, modify or add to" the City's solid waste disposal system, arguably the most important relate to sanitary landfill capacity. As was discussed in Section 3.4.2, the City's only sanitary landfill at QRSL is expected to provide sufficient capacity for the period covered by this Plan. However, since its life expectancy may not extend much beyond that time, a feasibility study is being proposed to identify landfill capacity within the City, the surrounding region and outside the region.

#### **4.1.2.3 Future Disposal Options**

A realistic assessment of changes in landfill usage requires comparing the costs of these changes (in the form of lost revenues) with the costs of possible alternatives. Since the City will have a continuing need for land disposal of solid waste, an alternative disposal site to QRSL will have to be available when the landfill is depleted.

One alternative would be to develop a City owned facility either inside or outside of the City. No suitable location for a new landfill has yet been identified and identifying a site will likely be difficult. Large tracts of undeveloped land are very scarce within the City, and any that are possible for a landfill would likely be desirable for industrial uses. If a site could be found, the acquisition and development costs for a new landfill would be very high. For example, the costs for QRSL are estimated to total \$500,000 an acre by the time Cell #6 is complete.

Exportation of waste is another alternative that will be explored. Many of the City's neighboring counties have implemented out of county transfer of waste. However, the City is under contract to deliver the majority of its waste to BRESCO for the period covered by this plan, thus making this option somewhat remote.

Since Baltimore is conveniently located at a port, a possible, yet remote alternative for solid waste disposal could be exporting baled wastes to another country. If another country sets a national policy of importing waste to enhance its economic development, such an alternative could possibly prove more reliable than exporting wastes within the United States.

The QRSL site can be considered a non-renewable resource. Several suggestions have been advanced for extending the life of QRSL without restricting its usage. These include redesigning the landfill to raise its finished elevation as was done in Montgomery County. Another suggestion is reusing landfill space through "landfill mining" and/or biochemical treatment. The opening of a one of the seven previously closed landfills owned by Baltimore City is also being explored.

## **4.2 QUARANTINE ROAD SANITARY LANDFILL ASSESSMENT**

### **4.2.1 Landfill Usage Prior to BRESCO**

In 1983, the City utilized three waste disposal facilities: Bowley's Lane Landfill, Woodberry Quarry Landfill, and the Pulaski Incinerator. These facilities accepted the 560,000 tons of waste material generated annually by the citizens of Baltimore.



With the two functioning landfills nearing capacity and the incinerator functioning inefficiently, long term solutions for the City's solid waste problems were needed. These solutions were the construction of the QRSL and the opening of the waste-to-energy facility known as BRESKO.

#### **4.2.2                    Impact of BRESKO on Landfill Usage**

In 1982, the City entered into agreements with the Authority to support construction of a resource recovery facility in southwest Baltimore. The purpose of the BRESKO project was to reduce the amount of solid waste that would have to be landfilled in the future in the Baltimore region. It has been determined that the utilization of BRESKO reduces the volume of landfill space that the debris occupies by up to 90 percent. The high percentage of ash being accepted at the landfill and the dense compaction of the ash has increased the life of the landfill.

The QRSL accepted approximately 578,000 tons of debris in 2001. Until 1998, the amount of debris landfilled annually at QRSL had been generally decreasing since the 1991 amount of 570,000 tons. The landfill accepts primarily inorganic material, specifically BRESKO ash, Water and Wastewater ash and grit, industrial debris, and City collected construction and demolition debris.

The preceding discussion indicates that when landfill capacity in the City was increased by the development of QRSL, land disposal of solid waste in the City increased also. Accepting large amounts of ash residue and other wastes at the landfill generated substantial revenues from tipping fees, offsetting much of the City's capital and operating expenditures for the landfill. At the same time, however, accepting large amounts of waste reduced the landfill's capacity more quickly than had been expected. This trend has been more readily apparent since 1998.

#### **4.2.3                    Costs of Quarantine Road Acquisition and Development**

The continuing expansion of QRSL requires a substantial capital investment by the City. Since debt service on funds borrowed to acquire and develop the landfill requires ongoing expenditures, it is useful to review the financing and costs of this facility to date.

The site for the landfill was acquired by the City in 1984, at a price of \$9.3 million. State grants were received for half of this cost. The balance was funded through the 5th Solid Waste Disposal Loan of 1980; \$1.9 million in general obligation bonds and \$2.75 million from the Northeast Maryland Waste Disposal Authority, representing proceeds of the sale of the former Pyrolysis Plant.

Other costs related to acquisition, design of the landfill and construction of the first cell, totaled \$4.1 million. A portion of the necessary funding came from current City revenues (general fund and "other" funds). The balance of

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the initial development cost (\$3.5 million) was financed through a conditional purchase agreement. The first cell was completed in 1985 (see Figure 4-1 for location of cells).

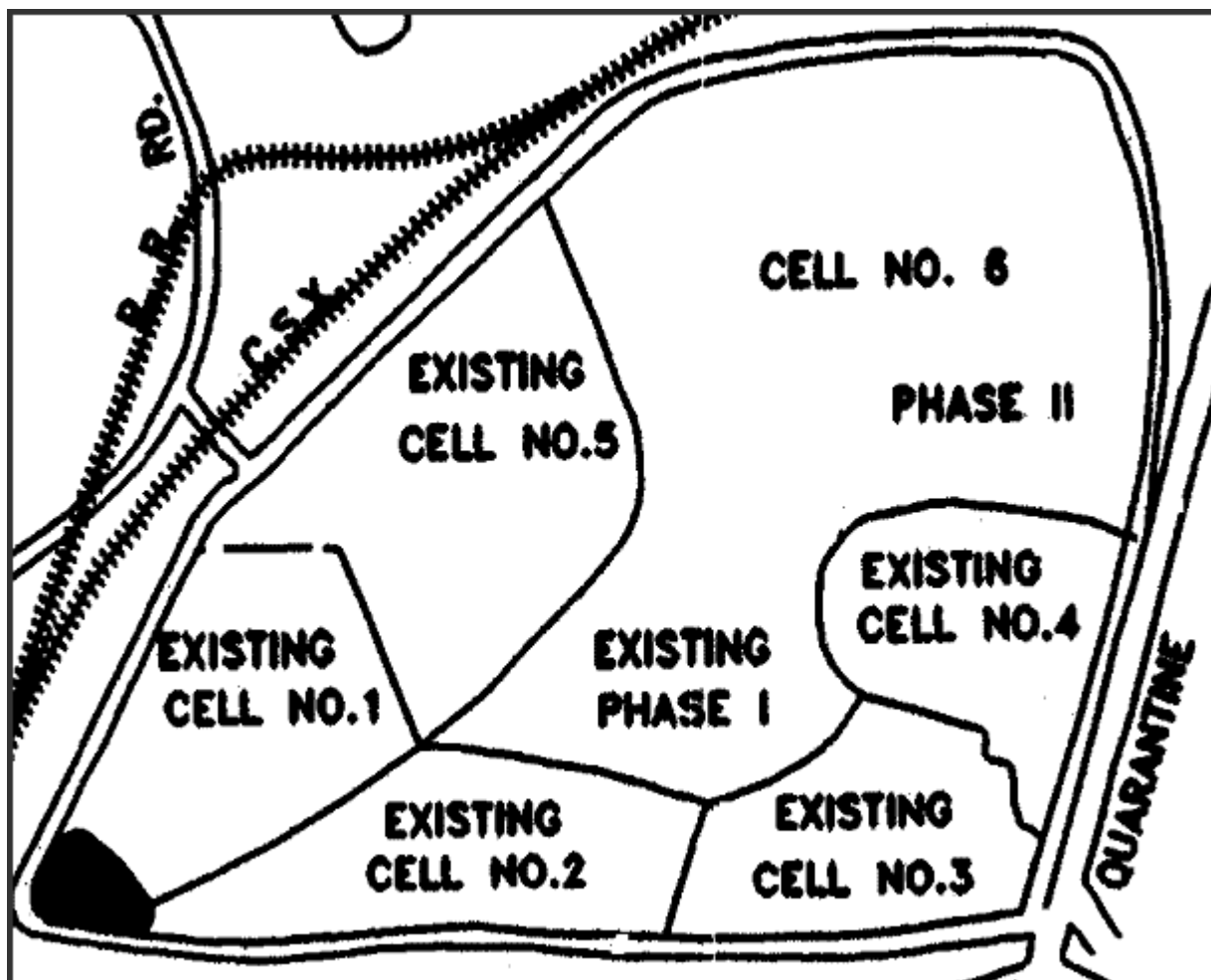
Construction of the second cell began in 1986; it extended into 1987. Construction contract and inspection costs for the second cell totaled \$2.4 million. Current revenues were used to fund the construction of Cell #2 (general fund and "other" funds).

Current revenues were used also to construct Cell #3. Construction contract and inspection costs for the third cell totaled \$860,000; with construction beginning in late 1987. It was completed in the summer of 1988. Other costs related to the design and construction of the second and third cells totaled \$190,000. These costs were funded through the 1st Solid Waste Loan of 1984 as well as current revenues.

Construction of the fourth cell began in the fall of 1988 and was completed 13 months later. The construction contract and inspection costs of \$3.2 million were funded with borrowed funds (a \$2.6 million conditional purchase agreement and approximately \$375,000 in general obligation bonds) and current revenues.

Construction of Cell #5 began in the spring of 1990, and was completed in the fall of the same year. Construction contract and inspection costs for the fifth cell totaled \$4.4 million. These costs were funded with a conditional purchase agreement.

FIGURE 4-1  
QUARANTINE ROAD SANITARY LANDFILL DEVELOPMENT PLAN



Other costs for site preparation for Cell #5 and landfill design and construction incurred while Cell #4 and Cell #5 were under construction totaled approximately \$1.3 million. These costs were funded by conditional purchase agreement funds (\$390,000) as well as general obligation bonds and current revenue.

Construction of Cell #6, Phase I began in June of 1992 and was completed in November of 1993 at a cost of \$8.4 million. This was funded by general obligation bond proceeds.

In summary, capital expenditures for the acquisition and development of Cells #1 through #6 at QRSL have totaled \$34.6 million. A total of \$10.0 million in conditional purchase agreement funding has been used to meet these costs. These conditional purchase agreement funds were supplemented with a combination of State grants, "other funds", City general funds, and general obligation bonds.

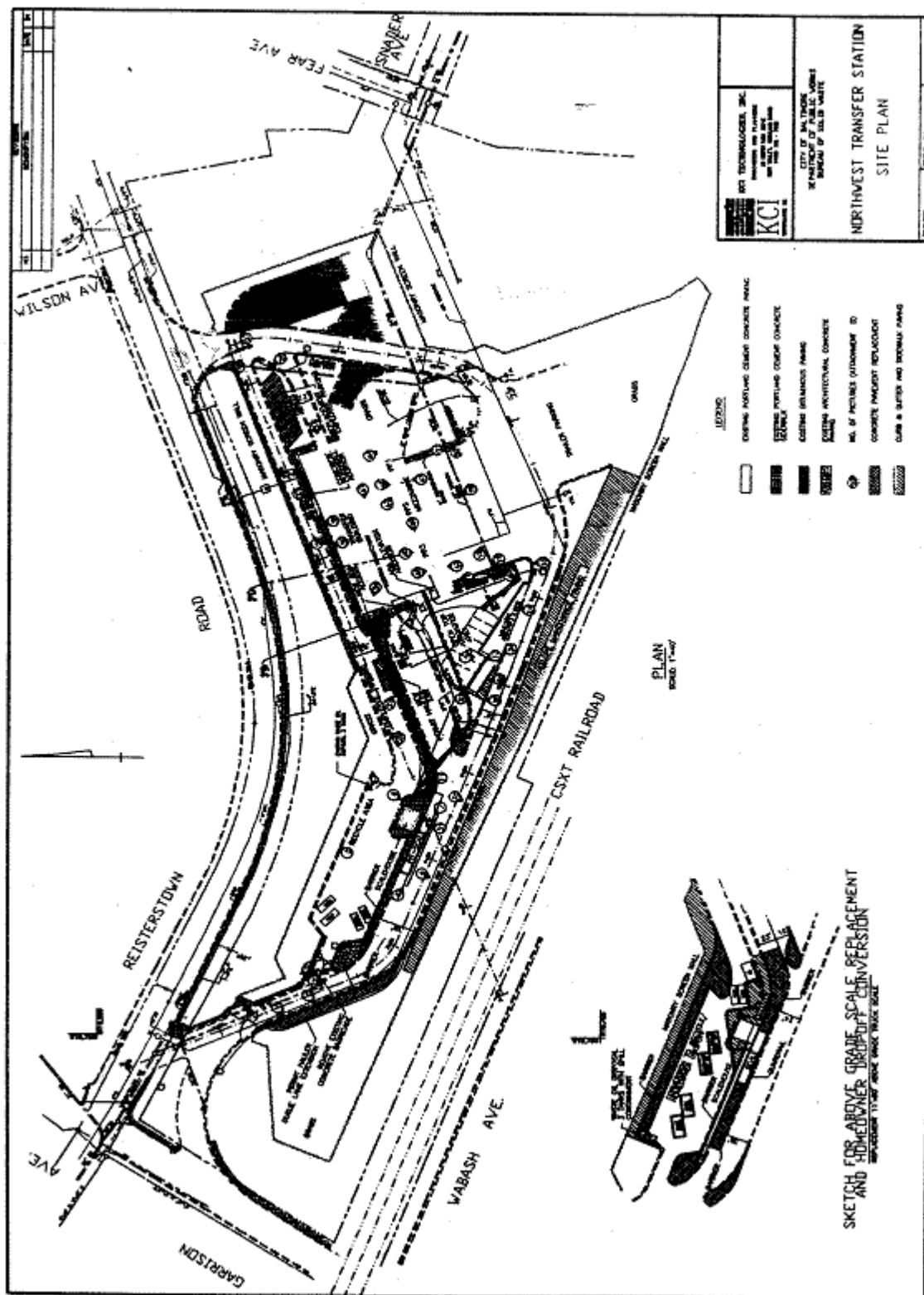
### **4.3 NORTHWEST TRANSFER STATION ASSESSMENT**

#### **4.3.1 Northwest Transfer Station Usage**

The Northwest Transfer Station (Figure 4-2) has been in operation since the late 1970s. The original design provided for a totally enclosed tipping floor with collection vehicles dumping into three (3) pits with hydraulic push plates used to compact the waste and push the waste into transfer trailers. The facility was originally designed for a maximum peak hourly capacity of 80 tons and a daily average of 400 tons.

In the mid 1980s, a two-position outdoor open top transfer addition to the transfer station was built north of the building. The facility is comprised of reinforced concrete faced retaining walls with an upper concrete paved apron that can accommodate up to seven (7) discharge vehicles. The original use for this facility was for bulky trash items, but it is now used primarily for the small hauler program (see § 4.1.2.1) while the bulky items are brought into the building and dumped into one of the three pits and compacted.

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While the amount of tonnage brought to NWTs has generally remained the same throughout its existence, the types of vehicles and waste brought there have changed significantly. When originally opened, the transfer station was used primarily by residential waste collection loadpackers. Until recently, the push pits not only compacted residential waste, but also compacted heavier, bulky wastes, thus putting extra strain on the equipment.

With this in mind, the City had earmarked over \$1.5 million for the replacement of these compactors and to improve the flow of traffic within the facility. These improvements are now scheduled to be in place by late 2003. Also, a project to build a facility for the collection of street sweeping debris from the City's mechanical street sweeping vehicles was completed in Spring 2001.

### **4.3.2 Northwest Transfer Station Future**

With the construction of the aforementioned improvements to the facility, combined with a projected minimal increase in trash generation over the period covered by this plan, the Northwest Transfer Station will be more than able to handle the projected tonnage over the next ten years (see Table 4-2). Projections of tonnage to be brought to the transfer station is based on the projected tonnage generated by the City as described in Chapter 3.

**TABLE 4-2  
PROJECTED TONNAGE DELIVERED TO BRESKO**

<b>YEAR</b>	<b>FROM NWTs</b>	<b>BRESKO</b>	<b>TOTALS</b>
2001	30,166	241,119	271,285
2002	53,070	241,764	294,834
2003	52,874	240,869	293,743
2004	52,678	239,978	292,656
2005	67,062	93,303	291,573
2006	66,814	92,958	290,494
2007	66,566	92,614	289,420
2008	66,320	92,272	288,349
2009	66,075	91,930	287,282
2010	65,830	91,590	286,219
2011	65,585	91,252	285,155

\* 2001 tonnage actual

#### 4.4 REGIONAL APPROACH TO WASTE MANAGEMENT

Since the inception of the Northeast Maryland Waste Disposal Authority (NMWDA) in the mid 1980's, an effort has been made to explore regionalization for aspects of the waste disposal systems of the City and the surrounding counties (Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties). In January of 1993, members of the Baltimore Metropolitan Council (BMC), comprised of the elected Executives in Baltimore City and Anne Arundel, Baltimore, Carroll, Harford and Howard Counties, signed a Regional Solid Waste Compact which outlined goals for future disposal of solid waste. These goals were to recycle as much waste as possible while developing composting and waste-to-energy facilities for the remainder of the waste. The intent of the landfills of these Subdivisions would only be for disposal of wastes that did not fall into the above categories. Firm commitments were received for the implementation of these goals by the Spring of 1996 from each of the Subdivision members of the BMC.

In its study titled "Strategies for Developing Regional Solid Waste Management Programs" (September 1996), the NMWDA found that most jurisdictions will start running out of landfill space in Fiscal Year 2011, if they continued to use the currently planned waste disposal methods. This report was the result of a year of discussions and data analyses by the Regional Planning Work Group, consisting of solid waste directors and representatives from each of the Subdivision of the BMC, NMWDA (including Montgomery County) and the Maryland Environmental Services (MES). Table 4-3 shows the Regional Disposal Summary during Fiscal Year 1996.

**TABLE 4-3  
REGIONAL DISPOSAL SUMMARY DURING FISCAL YEAR 1996 (TONS)**

<b>County</b>	<b>In-County Landfilling</b>	<b>Waste-to-Energy</b>	<b>Out of County Landfilling</b>
Anne Arundel	316	0	101
Baltimore City	281	434	130
Baltimore County	110	247	364
Carroll	104	0	0
Harford	58	89	0
Howard	177	0	0
<b>TOTAL</b>	<b>1,046</b>	<b>770</b>	<b>595</b>

Some of the 15 specific tasks of the Work Group coordinated by NMWDA included the following:

- Perform a comprehensive assessment of the region's waste generation and disposal issues through 2008.

- Identify and quantify current waste disposal capacity at the various private and county facilities within the region, including regional and state facilities and capacities in use.
- Identify the geography of the regional watershed, including import and export, for optimizing regional efforts.
- Update all waste management activities within the region, including the impact of recycling, reuse and waste reduction on the solid waste stream.
- Research what other similar regions may exist nationally, and determine if regional solutions are successfully being applied. If so, what are the complete components?

Of the 3.2 million tons of municipal solid waste being generated within the region, approximately 1.3 million tons of the waste is buried in sanitary landfills and 400,000 tons are being buried in construction and demolition landfills. Of the 1.7 million tons of waste that are being disposed of in landfills, only 450,000 tons are controllable by the counties and are not already committed under an existing disposal contract.

Since NMWDA's report has been written, Anne Arundel, Carroll and Howard County have all enacted plans to export most or all of the waste from their counties to prolong the life of their landfills.

The report also listed specific recommendations for the Subdivisions in strategies and methods of waste management. The intent of these recommendations was to help each of the Subdivisions attain the goals previously outlined in the Regional Solid Waste Compact. The Bureau will continue to cooperate with NMWDA and other Subdivisions in the implementation of the recommendations. These recommendations have been incorporated into Chapter 5, Plan of Action.

The City, through representation by NMWDA, participated in the Governor's Solid Waste Management Task Force, which was created in January of 1998. The scope of this task force was to assess local facility siting practices, assess the State permitting process, clarify local and State government responsibilities regarding solid waste management and examine other waste management issues within the State. The task force was charged with making recommendations to the Governor for the development, planning and implementation of a statewide, long-range solid waste management policy. The task force made recommendations in eight different categories, including Regionalization, Siting, Privatization and the Solid Waste Plan. To the fullest extent possible, the City has practiced many of these recommendations and will consider others in its waste management strategy.

#### **4.5 REGIONAL WASTE DISPOSAL**



Baltimore City's urban and densely populated environment presents challenges for waste disposal. Chapter 1 details the laws that restrict the construction of solid waste disposal facilities such as landfills and incinerators. Therefore, a comprehensive plan for solid waste management in the City must contain regional and cooperative components. While the City has the facilities to manage most of the waste streams discussed in this Plan, regional cooperation would be needed for those wastes the City is unable to properly manage.

#### **4.5.1 Asbestos Disposal**

Disposal of friable asbestos in the City of Baltimore is not permitted at this time, nor will it likely be allowed within the purview of this Plan. Private companies that remove asbestos in the City are required to transport this material out of the City for disposal. City government contracts any work dealing with the removal of asbestos to private companies.

#### **4.5.2 Construction and Demolition Debris**

There are no landfills in the City that are permitted for the disposal of construction and demolition debris (C&DD). The majority of this material is taken to recycling companies, which separate the useful material for resale. However, C&DD that is not recycled is taken to QRSL for disposal. Currently, the amount that is received is manageable, yet the continual demolition of buildings in the City may make the City more closely examine other options for the disposal of C&DD. If it is determined that the disposal of C&DD at the landfill is becoming a detriment to the long range disposal capacity of the landfill, the alternative of building a C&DD landfill would need to be considered. Since building this facility in the City is not feasible, the City would have to go into partnership with another jurisdiction.

#### **4.5.3 Dead Animals**

As of June 30, 2000, the City's contract with Valley Proteins, Inc. for the collection and disposal of dead animals was terminated with relatively short notice. Valley Proteins collected and disposed of these carcasses not only for Baltimore but for many of the surrounding counties. The only reasonable short-term solution for this problem was for the City to take these carcasses to the Phoenix Medical Waste Incinerator (see Section 3.2.5). However, this is a relatively expensive proposition since Valley Proteins recycled these animals in many instances which offset the cost of disposal of the carcasses. Incineration in a medical waste incinerator is a more involved operation and significantly more expensive.

The City is looking at many options for the disposal of these carcasses, including the construction of an animal crematorium. Since other jurisdictions are also exploring similar options, this would be a good opportunity for regional cooperation. A study conducted by the NMWDA indicated that while each jurisdiction would participate in the use of this facility none of them would want the facility located in their county. However, constructing a regional animal crematorium facility would be advantageous to the City.

#### **4.6 WASTE PREVENTION, SEPARATION AND REDUCTION**

In carrying out its solid waste management responsibilities, the City of Baltimore and other jurisdictions must set waste prevention and reduction as a high priority and develop an aggressive Plan of Action with realistic goals. Waste prevention and reduction is the most cost effective of all solid waste management strategies, topping the list over recycling, composting, incineration, and landfilling. Within the last five years, Baltimore City has increased the amount of attention given to waste prevention strategies. Some activities were demonstrations of carrying out the resolutions of the Regional Planning Council (precursor of the Baltimore Metropolitan Council) and local legislative bodies on this subject, but comprehensive and coordinated programs were lacking. Therefore, the City of Baltimore is actively promoting waste reduction within City government, among its citizens, and within the Baltimore region. In the same way that the American public has embraced the concepts of recycling and demanded of their governments and institutions that recycling programs be initiated, waste prevention and reduction are developing increased support.

Waste prevention and reduction in the broad marketplace is obviously beyond the control of Baltimore City government. Local government has however, exercised responsibility over its own waste stream and strongly encourages its citizens to act positively in this area. The City has initiated the use of electronic and computer technologies, such as E-Mail, CD-Rom, Diskettes, Cable Broadcasting, Electronic Faxing and Internet Access, to greatly reduce the amount of paper used in the City. The City's Internet web site at [www.baltimorecity.gov](http://www.baltimorecity.gov) gives useful information regarding City services and programs. Baltimore City has also adopted procurement policies within the Bureau of Purchases that underscore and actualize the commitment of the City to waste prevention and reduction. These policies are outlined in each contract that the Bureau of Purchases lets for bidding (see Figure 4-3). In addition, the City has encouraged double-sided printing of government documents and has begun to educate its citizens on the advantages of using mulching lawn mowers. In Chapter Five a Plan of Action is presented to maximize the potential for waste prevention and reduction in the City of Baltimore.

#### **4.8 EMERGENCY RESPONSE SYSTEM**

State regulations for the development of comprehensive solid waste management plans require that Chapter 4 of

such plans evaluate programs and procedures for responding to the unplanned (emergency) spillage or leaking of hazardous wastes within the local jurisdiction. In compliance with this requirement, the City's emergency response system for hazardous wastes is presented briefly below.

**FIGURE 4-3**  
**BUREAU OF PURCHASES RECYCLING POLICY**

<div data-bbox="576 705 945 741" data-label="Section-Header"> <p><b>BALTIMORE RECYCLES</b></p> </div> <div data-bbox="370 816 1153 963" data-label="Text"> <p>It is the policy of the City of Baltimore to purchase and use recycled and recyclable products whenever practicable. Potential bidders are encouraged to suggest innovative products to further this policy.</p> </div> <div data-bbox="370 1035 1153 1146" data-label="Text"> <p>If this bid solicitation specifies a minimum recycled content, any bid failing to meet the specifications may be considered non-responsive.</p> </div> <div data-bbox="370 1218 1153 1400" data-label="Text"> <p>All bids, proposals, and reports shall be submitted on recycled and recyclable paper printed on both sides, where practicable, with removable or reusable bindings or staples. Products delivered to the City must be packaged in recycled and recyclable materials, when practicable.</p> </div> <div data-bbox="370 1472 579 1507" data-label="Section-Header"> <p><b>DEFINITION :</b></p> </div> <div data-bbox="370 1545 1153 1766" data-label="Text"> <p><u>Pre-consumer material</u> is waste generated during production, which cannot be returned to the same production process, nor used by another company to make a product similar to the original product, and includes all wastes generated during the intermediate steps in producing an end product by succeeding companies.</p> </div>	<p>4-18</p>	<p><i>TEN YEAR SOLID WASTE MANAGEMENT PLAN</i></p>
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Post-consumer material means only those products generated by a business or a consumer which have served their intended end uses and which have served their intended end uses and which have been separated or diverted from waste; wastes generated.

Under the leadership of the Baltimore City Fire Department, which has the principle responsibility for responding to hazardous material emergencies in the City, a Hazardous Materials Action Plan has been developed by Baltimore's Local Emergency Planning Committee. The plan provides instructions for handling hazardous material emergencies, including sources of information, parties to be notified and the like. The City considers this plan to be quite satisfactory in that it establishes a complete and workable response system.

In general, the City's emergency response system is activated by telephone calls to 911. Callers are asked to provide as much information as possible about the nature of the hazardous material, impending danger, and location and extent of the incident. The facility where the incident occurred or the transporter is required to notify the National Response Center after calling 911.

The Fire Department responds to the 911 call by dispatching a hazardous material task force of fire engines/trucks and a rescue team. They notify other agencies and resources as required. At the site of the incident, an operations command post is established and the severity of the incident is determined based on the likelihood of public impact. Depending on the likelihood of public impact and its probable extent, the incident commander may initiate "secure premises," "public relocation" or "general information" procedures to protect the public until the hazard has been neutralized.

The entire response to the emergency is coordinated by the Fire Department, whose personnel are trained and equipped to handle hazardous material emergencies. Other agencies respond only at the direction of the Fire Department's incident commander, so that any duplication of efforts or confusion can be avoided.

The City's Hazardous Materials Action Plan is incorporated by reference into this solid waste plan. The plan is available for public review in the Maryland Room at the Enoch Pratt Central Library in downtown Baltimore. Also, copies of the plan may be obtained from the Fire Department.